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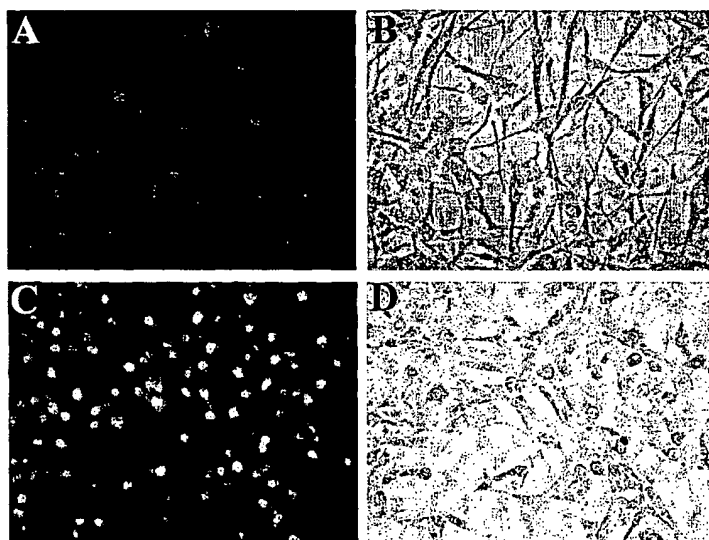
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(54) Title: METHOD OF PREPARING CELL FOR TRANSPLANTATION



(57) **Abstract:** The invention features a method of producing cells for transplantation into myocardial tissue of a mammal and a method for treating a disorder using the cells. The method comprises the steps: (a) providing bone marrow stem cells that have not been immortalized; (b) culturing said bone marrow stem cells in a culture medium containing IGF-1 (Insulin-like Growth Factor-I) under conditions that induce said cells to differentiate into cardiomyogenic cells; (c) monitoring the differentiation state of the cells of step (b); and (d) collecting the cells of step (b) when at least about 50 % of said cells are cardiomyogenic cells. According to the method, the highest yield of the cells to be transplanted into mammal cardiac tissue which have the characteristics of cardiomyocyte cell lineage mostly can be obtained. The cells produced as such can be used for treating a disorder characterized by insufficient cardiac function.

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